Amendments To The Specification

PATENT

Docket: CU-4805

Please replace the paragraph in the specification on page 1, line 33 to page 2, line 8 with the following amended paragraph:

Accordingly, the garbage collection is requested when necessary, and a predetermined process is performed only during its activated period of time. In the garbage collection intermittently performed by being passively activated, what influences a processing time is influenced by both how much garbage must be collected and how long the length of the period of time is required for examining whether an object is the garbage. The former is determined according to a kind of memory in which an object management table and objects to be collected are mainly placed, and in a memory requiring a long processing time in a write operation, a processing time depends on the amount of processed data. The latter usually depends on the number of objects to be examined.

Please replace the paragraph in the specification on page 5, lines 7-16 with the following amended paragraph:

Command processing 142 takes place between receiving the command from the host and responding to the command. If the host (or the terminal) 140 cannot receive the response within a predetermined time limit due to a long processing time in the smart card 150, the host (or the terminal) 140 performs a timeout process. When the timeout process is performed, the host (or the terminal) 140 expects the response within the predetermined time limit by re-transmitting the command to the smart card 150 a predetermined number of times in step 144. However, if the timeout process is performed every time, the host (or the terminal) 140 determines that the response is not received in step 146 as shown in FIG. 1C. A user can set the number of times the host (or the terminal) 140 transmit a command to the smart card 150 when a response does not return in a predetermined time limit.

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Please replace the paragraph in the specification on page 6, lines 17-22 with the following amended paragraph:

Referring to FIG. 2B, in a communication cycle 250, a smart card with a processor performs a command received from a host (or a terminal) and a smart card management process in an active mode 260. Accordingly, in a case of garbage collection, if a garbage collection request is internally generated and transferred to a COS, mark/sweep phases of the garbage collection are performed together in a current communication cycle or a next communication cycle.

Please replace the paragraph in the specification on page 6, lines 17-22 with the following amended paragraph:

Referring to FIG. 3B, a smart card processes a command --310-- and measures a residual time --312-- up to a response time limit or a user waiting time limit for QoS. The smart card calculates the amount of garbage collection to be performed in a communication cycle, and if the garbage collection can be finished in the residual time, the smart card finishes the garbage collection --314--.

Please replace the paragraph in the specification on page 9, lines 17-22 with the following amended paragraph:

Referring to FIG. 3D garbage collection 330 is performed in a first communication cycle. [[in]]--In-- a second communication cycle, two parts 332 and 334 of --the-- different garbage collection processes are performed. FIG. 3D shows a part 332 when a residual part of [[a]] --the-- garbage collection process performed in a first communication cycle is transferred and a part 334 when a new garbage collection process requested in the second communication cycle is partially performed during an available time remained.

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Please replace the paragraph in the specification on page 9, lines 33-34 with the following amended paragraph:

FIGS. 3F and 3G illustrate cases of performing garbage collection in the middle of command processing. FIG. 3F shows a first garbage collection being distributed and performed in parts 350, 352, and 354; and a second garbage collection being distributed and performed in parts 356 and 358. FIG. 3B shows a first garbage collection being distributed and performed in parts 360, 362, 364, and 366; and a second garbage collection being distributed and performed in parts 368, 370, and 372.